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10/607,837	06/27/2003	Thomas M. Hayes	14416	8461

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DORSEY & WHITNEY LLP
INTELLECTUAL PROPERTY DEPARTMENT
SUITE 1500
50 SOUTH SIXTH STREET
MINNEAPOLIS, MN 55402-1498

EXAMINER

SAYALA, CHHAYA D

ART UNIT	PAPER NUMBER
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1794

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11/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/607,837	Applicant(s) HAYES ET AL.	
	Examiner C. SAYALA	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 21-23 read as follows:

21. (Currently Amended) The method of claim 1, wherein feeding a daily ration to a pig comprises feeding a first daily ration to a pig during a first phase, feeding a second daily ration to a pig during a second phase, and feeding a third daily ration to a pig during a third phase, wherein at least one of the first daily ration, the second daily ration, and the third daily ration is different from the other daily rations in weight percent of the hydrogenated poultry fat.

22. (Currently Amended) The method of claim 21, wherein the weight percent of the hydrogenated poultry fat decreases from the first daily ration to the second daily ration to the third daily ration.

23. (Currently Amended) The method of claim 22, wherein the weight percent of the hydrogenated poultry fat is 3% in the first daily ration of the 2% in the second daily ration phase and 1% in the third daily ration diet.

The subject matter of the above claims could not be found in the specification as originally filed. A "word" search of the original specification, only yields the following text that has any relevance to the above claims:

[0014] According to various embodiments of the present invention, the amount of hydrogenated poultry fat added to the animal feed varies. In one embodiment, the animal feed includes hydrogenated poultry fat in an amount of from about 0.5% to about 5% by weight. In one embodiment, the animal feed includes hydrogenated poultry fat in an amount of from about 1% to about 3% by weight. In one embodiment, the animal feed includes hydrogenated poultry fat in an amount of about 1.5%. In other embodiment, the weight percent of the hydrogenated poultry fat varies during the aging and growth of the animal. For example, in one embodiment, the amount of hydrogenated poultry fat added to the animal feed decreases as the animal nears a final market weight. In one embodiment, for example, the animal feed includes 3%, 2%, and then 1% hydrogenated fat by weight over the final three phases of the finishing diet.

Note that this relates to separate 'embodiments' and not to any "phases" of feeding. This is a 'new matter' rejection. Upon applicant pointing out where the subject matter of the above claims occurs in the specification, as originally filed, this rejection will be withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Livingston (US Patent 6033716) and Johnston (US Patent 5498434) in view of admitted prior art in the specification at page 1, paragraph [002] and Cook (US Patent 5851572) and further in view of Evans et al. (US Patent 5427802) and Schaub (US Patent 5215766).

Livingston teaches animal feeds that contain poultry fat (see abstract). See claims 5 and 17, which recite the preferred embodiment of the invention, which is drawn to forming an animal feed that contains fat. Johnston also teaches fat containing animal feeds and teaches use of poultry fat (see col. 2, line 51). Specifically, this reference teaches:

Animal fat, which is present in much animal feed, significantly limits the shelf life of such feed. Antioxidants have been found to improve the stability and to add to the shelf life of animal-fat-containing feed. Although there is a pressing call for animal feed without synthetic antioxidants, the cost of natural antioxidants (in the amount considered to be required) has heretofore been prohibitive.

In excess of 95 percent of the animal (mammal and/or poultry) fat used in animal feed (including pet food) is what is referred to as inedible (not for human consumption) fat, which differs significantly in antioxidant requirements from such animal fats as lard, which is edible fat. Due to the nature of raw materials from which it is derived, inedible fat often contains substances, e.g. trace metals, which serve to catalyze oxidation. For this reason, antioxidant systems intended for use in inedible fats have historically contained chelators, such as citric acid, to inactivate such substances.

Both references do not teach that the poultry fat is hydrogenated.

Schaub teaches hydrogenating fats. Schaub teaches that high fat feeds or rations, used in animal feeds, provide energy needs of animals, and includes fats such as lard, tallow etc. The patentee teaches that when non-hydrogenated fats of high natural melting point are used, they are not hydrogenated. However, if the fats are of a low melting point variety, they are hydrogenated (i.e. have melting point lower than the body temperature of the animal being fed). Using such hydrogenated fat is said to improve the quantity and quality of the feed (see col. 5, lines 4-19). For instance, Schaub states that while fats provide the energy demands of animals, only a maximum of about 5% can be used because an amount more than this would affect the digestibility of such. See col. 1, lines 18-20, 50-52, and claim 2, which recites a fat content in an amount in excess of about 5%. (Such amounts coincide with the recited 0.5 to less than about 5% and the 35% in claim 1 herein). Thus this reference provides the motivation as well as the method for hydrogenating fats, establishing that such were known in the prior art at the time the invention was made.

It is known in prior art that the firmness of pork belly is obtained by providing saturated fats in the diet of a pig (see page 1 of specification that discusses what is known in prior art). See also col.1, lines 34-35 in Cook which discloses prior art knowledge pertinent to these claims:

The only method previously known to assure a firm fat was to feed animals fats or oils high in saturated fats.

In fact, Evans et al. teach that to improve carcass firmness and quality, feeding highly saturated fats to animals is beneficial. The patentees teach that the highly saturated fats should have an iodine value in the range 5-35. Finishing pigs fed saturated fats in feed ration even for the last 3 weeks of the cycle resulted in acceptable levels of carcass firmness. The weight claimed in instant claim 4 obviously addresses that of a finishing pig, and this would have been obvious to one skilled in the art who would have known that finishing pigs weigh from 125 pound upwards or thereabouts. At col. 1, Evans et al. disclose prior art knowledge thus:

Until the mid-1980's, swine have generally been fed no added feed fat at all during the growing-finishing cycle. The growing-finishing ration consists primarily of corn, soybeans, or a combination of corn and soybean meal. More recently, it has been determined that, if the ration includes unsaturated vegetable oils or animal fats, the weight gain rate of the animal will increase. In other words, the use of unsaturated vegetable or animal oils will reduce the growing-finishing cycle of the swine, and thus make the operation more profitable. In such diets, the unsaturated vegetable oils generally have an iodine value greater than 80 or the animal fat generally has an iodine value greater than 45.

Therefore, Evans et al. teach that in addition to the vegetable oils or animal oils, it is beneficial to add to or "include" in the animal diet, highly saturated or partially hydrogenated fats with an IV of 5-35. The patentee notes that due to the higher digestibility of such saturated/hydrogenated fats, the animals have a higher weight gain. See col. 2, lines 30-40. Evans et al. teach an amount of no more than 10 wt% of such saturated fats (abstract) and again at col. 4, as 5% or less, see lines 1-8.

Based on the combination of the above references, it would have been obvious to hydrogenate even poultry fat, before feeding it to finishing swine since the primary references teach using poultry fat in animal feed and Evans et al in particular teach that finishing pigs benefited in carcass quality and firmness by being fed hydrogenated fats, while Schaub establishes that hydrogenating fats was known in prior art and was beneficial as to animal digestion. As for the claimed iodine value, Evans et al teach that too, and to optimize such values for *poultry* fat would be within the realm of the artisan, since it is known that the iodine value is a means to measure the degree of saturation required and that the lower iodine value, the higher the hydrogenation. Note that Evans et al. teach iodine values of 5-35, as well as prior art values such as greater than 45, (col. 1, line 50). Therefore, to use a fat with an iodine value greater than about 35, such as 36, cannot be said to be inventive, particularly when no unobvious result for such values has been established or asserted in the instant specification. Furthermore, to mix in tallow, a known saturated fat and already used in animal feeds (Schaub), that contain grain (see Schaub, col. 4), would have been obvious to one of ordinary skill in the art, because to combine 2 ingredients known for their use for the same purpose is *prima facie* obvious. Claim 1 limitations/steps of slaughtering, injecting the pork belly, pressing the pork belly and slicing are all *typical* steps known in the art, as discussed on page 1 of the specification, which admits that these are typical process steps (see line 9). As for the amounts of fat in the feed, Evans et al. teach such amounts. See col. 2, lines 58-60 and col. 4. With regard to determining amounts of hydrogenated fat required in the daily ration for various phases of the growth of finishing swine, the

claimed amounts would have been obvious to one of ordinary skill in the art through routine experimentation in an effort to optimize the carcass quality and firmness by feeding hydrogenated fats, already shown as advantageous and based on amounts established by Evans for finishing pigs. To combine prior art elements to yield a predictable result is not inventive.

Response to Arguments

Applicant's arguments filed 9/17/2007 have been fully considered but they are not persuasive.

First, summarizing the above rejection, Livingstone and Johnston establish that poultry fat was part of animal feeds, Schaub teaches that hydrogenated fats in feeds helped digestibility and teaches hydrogenating fats, Cook teaches that prior art already was aware of the fact that saturated fats in feeds assured firm fat in meats, Evans et al. teach that hydrogenated feeds with 5-35 IV, fed in amounts no more than 10 wt% aided digestibility and carcass firmness and meat quality. Evans et al. also teach that in prior art unsaturated vegetable oils or animal fats with IVs of 80 or 45, respectively have been used. Therefore, to hydrogenate poultry fat and add it in the same amounts as Evans et al. and to optimize the fat ration so that it is neither all fully saturated fats nor hydrogenated fats, since this was found non-beneficial in terms of digestibility (col. 2, lines 10-15), but to use a diet that includes highly (not fully) saturated or partially hydrogenated animal or vegetable fat, such as hydrogenated poultry fat, and to

correspondingly optimize the IV values, for example to 36, would have been obvious and within the ambit of ordinary skill. After all, Evans et al. teach all the elements except that the fat is from poultry, which was commonplace in animal feeds at the time the invention was made, and that the IV value was greater than 35, where fats with IV values over 35 were also used in animal feeds at the time the invention was made (see Evans et al., col. 1, lines 45-50).

On page 6, applicant states that none of the references shows "0.5 to 5 percent by weight hydrogenated poultry fat". This in fact, is true, which is the reason for the use of 35 USC 103. However, the combination of references, given the level of skill in the art and the amount of guidance, the reasons disclosed in each reference as explained above in great detail, would render obvious the claimed invention.

Livingston has been faulted for its teaching of poultry fat only in the abstract and for mixing the fat with litter, and not disclosing hydrogenated fat in the claimed amount. First, litter is not excluded from the feed of the instant claims. Next, swine/hog/pig feed do not exclude waste or litter. Applicant states that the poultry fat of the waste could not be hydrogenated. Livingston has been applied for its showing that poultry fat was always a part of animal feeds in prior art.

Johnston, applicant states, teaches animal feed, but particularly pet food, where antioxidants are added to the fat to increase shelf-life. The reference, applicant states, does not teach hydrogenated poultry fat, and the amounts claimed herein. Again, Johnston has been applied for its showing that poultry fat was always a part of animal feeds in prior art.

Applicant has stated that the examiner has used impermissible hindsight (page 6 of the response). In this regard, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant states that the examiner has cited five references to correct the "deficiencies" of Livingstone and Johnston (see page 8). In response, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

With regard to Schaub, applicant is advised that the reference teachings have been expanded to show that the reference clearly teaches hydrogenating fats *and* that inclusion of such fats improved the quality of the feed. Applicant has criticized Schaub for teaching ranges of fat in excess of 0.5 to less than about 5 percent by weight. Instant claim 1 also clearly recites "fat greater than about 35", and therefore, Schaub's disclosure falls within this amount.

Applicant has faulted the examiner's application of Cook by stating that only one statement has been made about Cook. Nonetheless, an important statement, one that discloses that saturated fats in feeds produces firm fat in the meat. Such disclosure,

even if a single statement is still pertinent to the claimed invention and is not fatal to the combination because it is a single statement.

With regard to the statements directed to the Evans reference, since the process of hydrogenation is known in the art (Schaub) to obtain a degree of hydrogenation between those disclosed by Evans at 45 for animal fats (col. 1) of prior art and those disclosed by Evans et al. for the hydrogenated fats of his invention (5-35), would have been obvious. The specification does not disclose any criticality for the now claimed IVs. Furthermore, the specification shows benefits for values between about 60 to about 35, or about 45 and about 35, or about 40 (see page 3). Note, too, that the claims recite "greater than about 35" (claim 5, claim 6, claim 14), which does not distinguish the "35" of Evans et al., which has been discussed in further detail in the rejection itself.

At page 11, applicant has challenged the examiner to produce a reference that teaches both fat and hydrogenated fat in amounts that are fat requirements in swine diets. Besides the references already cited in the last Office action ("two bulletin references") that shows just fat, the examiner is making of record a reference that teaches hydrogenated fat (coconut oil) in the amount of 0.6 to 5 wt% for finishing pigs.

In view of Evans et al. teaching amounts of fat, the bulletin references have been removed, to simplify and narrow down the rejection/issues. Indeed, the documentary reference demanded by applicant and now made of record establishes that hydrogenated fat in an amount between 0.6-5wt% were known in prior art to be beneficial for meat quality and that a poor quality fat has a high iodine number. Based

on the applied references and such prior art knowledge, iodine values with numbers such as those claimed are rendered obvious, barring any evidence to the contrary.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Sayala whose telephone number is (571) 272-1405. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

Application/Control Number:
10/607,837
Art Unit: 1794

Page 13

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C. SAYALA
Primary Examiner
Group 1700.